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ABSTRACT OF THE DISCLOSURE

A carburetor with a valve assembly having a plastic cam body connected to a plastic shaft which extends into the carburetor body and a valve head press-fit into a slot formed through the plastic shaft. Desirably, the valve assembly eliminates the use of threaded fasteners and the need to swage or otherwise deform any of the components to connect them together. Desirably, the shaft and cam body are constructed and arranged to prevent relative rotation between them. This permits accurate location of the cam body on the shaft and facilitates calibration of the throttle valve assembly between its idle and wide open throttle positions. Further, the characteristics of the throttle valve assembly can be changed by simply providing a cam body having a different shape or construction with the shaft and/or valve disc being the same for a wide range of carburetors. The slot in the shaft is preferably longer than the diameter of the valve disc so that the valve disc may shift axially relative to the shaft so that it is self-centering within the fuel and air mixing passage. The valve disc can preferably also shift laterally relative to the shaft. This greatly facilitates assembly and manufacture of the throttle valve assembly by greatly increasing the tolerances with respect to the location of the valve disc on the valve shaft and of the slot.